

WHAT IS CLAIMED IS:

SUB A27

1. A system for retrieving data from a database using a data management system, comprising:
 - a change retrieval engine coupled to the data management system and operable to:
 - determine that data in the database managed by the data management system has been changed;
 - receive information from the data management system identifying one or more categories with which the changed data is associated;
 - access a data model to identify data to be retrieved from the database using the data management system according to the received information, the data model identifying data related to the categories;
 - request the data identified by the data model from the data management system;
 - receive the data from the data management system;
 - store the data in a data log; and
 - communicate a transfer command; and
 - a change transfer engine coupled to the change retrieval engine and operable to:
 - receive the transfer command;
 - obtain the data from the data log; and
 - communicate the data to an external system.
2. The system of Claim 1, wherein:
 - the data management system comprises an enterprise resource planning (ERP) system; and
 - the external system comprises an external planning system.

3. The system of Claim 1, wherein the change retrieval engine is further operable to monitor the data management system to determine when a change document is created, the change document indicating that data managed by the data management system has been changed.

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4. The system of Claim 1, wherein the change retrieval engine is further operable to receive a message from the data management system indicating that data managed by the data management system has been changed.

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5. The system of Claim 1, wherein the categories with which the changed data is associated comprise business objects.

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The system of Claim 5, wherein the business objects are identified in the data model by a business object name.

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7. The system of Claim 5, wherein the business objects are identified in the data model by a name of a main table of data associated with the business object in the data management system.

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8. The system of Claim 5, wherein the change retrieval engine is further operable to receive one or more key values from the data management system, each key value identifying an instance of the business object for which data was changed.

9. The system of Claim 1, wherein:
the data model identifies one or more tables managed by the data management system from which to retrieve data; and
the change retrieval engine is further operable to request data from the tables that is associated with one or more instances of a business object, the instances of the business object identified by one or more key values received from the data management system.

10. The system of Claim 1, wherein:
the data model identifies one or more tables managed by the data management system from which to retrieve data; and
the change retrieval engine is further operable to apply field reductions to the data identified by the data model, the field reductions indicating one or more fields of the tables containing desired data.

11. The system of Claim 1, wherein:
the data model identifies one or more tables managed by the data management system from which to retrieve data; and
the change retrieval engine is further operable to apply field filters to the data identified by the data model, the field filters indicating the desired data in the tables.

12. The system of Claim 1, wherein the data identified by the data model to be retrieved from the data management system further includes data related to the changed data.

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13. The system of Claim 1, wherein the change retrieval engine is further operable to:

access a distribution model to determine one or more serialization groups into which the data identified by the data model is to be divided; and

5 store the data received from the data management system in the data log according to the serialization groups.

14. The system of Claim 13, wherein the change retrieval engine is further operable to:

10 access the distribution model to determine destination information for one or more external systems to which the data in the serialization groups is to be communicated; and

15 store the destination information for the one or more external systems with the serialization groups in the data log.

15. The system of Claim 14, wherein the change transfer engine is further operable to communicate the serialization groups to the external systems identified by the destination information, the data in each serialization group communicated to the associated external system in an order that the data in the database was changed.

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16. The system of Claim 13, wherein the change transfer engine is further operable to:

25 access the distribution model to determine destination information for one or more external systems to which the data in the serialization groups is to be communicated; and

communicate the serialization groups to the appropriate external systems using the destination information, the data in each serialization group communicated to the associated external system in an order that the data in the database was changed.

17. The system of Claim 1, wherein the change transfer engine is further operable to:

create an error log if data is not communicated to an external system;
receive a second transfer command indicating additional data has been stored
in the data log; and

communicate the data associated with the error to the external system before communicating the additional data to the external system.

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18. A method for retrieving data from a database using a data management system, comprising:

determining that data in the database managed by the data management system has been changed;

5 receiving information from the data management system identifying one or more categories with which the changed data is associated;

accessing a data model to identify data to be retrieved from the database using the data management system according to the received information, the data model identifying data related to the categories;

10 requesting the data identified by the data model from the data management system;

receiving the data from the data management system; and
communicating the data to an external system.

15 19. The method of Claim 18, wherein:

the data management system comprises an enterprise resource planning (ERP) system; and

the external system comprises an external planning system.

20 20. The method of Claim 18, wherein determining that data managed by the data management system has been changed comprises monitoring the data management system to determine when a change document is created, the change document indicating that data managed by the data management system has been changed.

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21. The method of Claim 18, wherein determining that data managed by the data management system has been changed comprises receiving a message from the data management system indicating that data managed by the data management system has been changed.

22. The method of Claim 18, wherein the categories with which the changed data is associated comprise business objects.

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23. The method of Claim 22, wherein the business objects are identified in the data model by a business object name.

24. The method of Claim 22, wherein the business objects are identified in the data model by a name of a main table of data associated with the business object in the data management system.

25. The method of Claim 22, further comprising receiving one or more key values from the data management system, each key value identifying an instance of the business object for which data was changed.

26. The method of Claim 18, wherein:
the data model identifies one or more tables managed by the data management system from which to retrieve data;
the method further comprises receiving one or more key values from the data management system, the key values identifying instances of a business object; and
requesting the data identified by the data model comprises requesting data from the tables that are associated with one or more instances of the business object.

27. The method of Claim 18, wherein:
the data model identifies one or more tables managed by the data management system from which to retrieve data; and
the method further comprises applying field reductions to the tables identified by the data model, the field reductions indicating one or more fields of the tables from which to request data from the data management system.

28. The method of Claim 18, wherein:

the data model identifies one or more tables managed by the data management system from which to retrieve data; and

5 the method further comprises applying field filters to the tables identified by the data model, the field filters indicating the relevant data in the tables to be requested from the data management system.

10 29. The method of Claim 18, wherein the data identified by the data model to be retrieved from the data management system further includes data related to the changed data.

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30. The method of Claim 18, further comprising:

accessing a distribution model to determine one or more serialization groups into which the data identified by the data model is to be divided;

15 access the distribution model to determine destination information for one or more external systems to which the data in the serialization groups is to be communicated; and

20 communicating the serialization groups to the external systems identified by the destination information, the data in each serialization group communicated to the associated external system in an order that the data in the database was changed.

31. The method of Claim 18, further comprising:

creating an error log if data is not communicated to an external system; and

25 communicating the data associated with the error to the external system before communicating additional data received from the data management system to the external system.

32. A system for retrieving data from a database using a data management system, comprising:

a database operable to store data;

5 a data management system operable to access and change the data in the database; and

a data access interface system operable to:

determine that data in the database has been changed;

10 receive information from the data management system identifying one or more categories with which the changed data is associated;

15 access a data model to identify data to be retrieved from the database using the data management system according to the received information, the data model identifying data related to the categories;

request the data identified by the data model from the data management system;

15 receive the data from the data management system; and

communicate the data to an external system.